

WHAT IS CLAIMED IS:

1 1. For use in a wireless communications system, a
2 mobile switching center comprising:

3 a controller which, in response to receiving a
4 clear request triggered by a mobile station terminating
5 call connections while a call involving the mobile station
6 is holding following a call waiting notification to the
7 mobile station, transmits a message to a base station
8 serving the mobile station to maintain resource allocations
9 designated for the mobile station and alert the mobile
10 station of the holding call.

11 2. The mobile switching center according to claim 1,
12 wherein the message is a clear reject message defined to
13 prompt maintenance of the resource allocations designated
14 for the mobile station and transmission of an alert to the
15 mobile station of the holding call.

1 3. The mobile switching center according to claim 1,
2 wherein the message is a clear command message with a cause
3 value defined to prompt maintenance of the resource
4 allocations designated for the mobile station and
5 transmission of an alert to the mobile station of the
6 holding call.

1 4. The mobile switching center according to claim 1,
2 wherein, after transmitting the message, the controller
3 awaits a connect message indicating that the mobile station
4 has initiated connection to the holding call.

FOR FEEDBACK

1 5. For use in a wireless communications system, a
2 base station comprising:

3 a controller which, in response to receiving a
4 clearing procedure message from a mobile switching center
5 triggered by a mobile station which is served by the base
6 station terminating call connections while a call involving
7 the mobile station is holding following a call waiting
8 notification to the mobile station, maintains resource
9 allocations designated for the mobile station and alerts
10 the mobile station of the holding call.

11 6. The base station according to claim 5, wherein
12 the clearing procedure message is a clear reject message
13 defined to prompt maintenance of the resource allocations
14 designated for the mobile station and transmission of an
15 alert to the mobile station of the holding call.

1 7. The base station according to claim 5, wherein
2 the clearing procedure message is a clear command message
3 with a cause value defined to prompt maintenance of the
4 resource allocations designated for the mobile station and
5 transmission of an alert to the mobile station of the
6 holding call.

1 8. The base station according to claim 5, wherein,
2 after alerting the mobile station of the holding call, the
3 controller awaits a connect order from the mobile station
4 requesting connection of the mobile station to the holding
5 call.

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1 9. A wireless communications system, comprising:

2 a base station serving a mobile station
3 terminating call connections while a call involving the
4 mobile station is holding following a call waiting
5 notification to the mobile station; and

6 a mobile switching center coupled to the base
7 station,

8 wherein the mobile switching center, in response
9 to receiving a clear request to clear resource allocations
10 designated for the mobile station, transmits a message to
11 the base station to maintain the resource allocations
12 designated for the mobile station and alert the mobile
13 station of the holding call.

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20 10. The wireless communications system according to
21 claim 9, wherein the message is a clear reject message
22 defined to prompt maintenance of the resource allocations
23 designated for the mobile station and transmission of an
24 alert to the mobile station of the holding call.
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11. The wireless communications system according to claim 9, wherein the message is a clear command message with a cause value defined to prompt maintenance of the resource allocations designated for the mobile station and transmission of an alert to the mobile station of the holding call.

12. The wireless communications system according to claim 9, wherein a timer having a default value of 1.5 seconds is started by the clear request and stopped by the message.

13. The wireless communications system according to claim 9, wherein a timer having a default value of 30 seconds is started by the message and stopped by a connect message indicating that the mobile station has initiated connection to the holding call.

14. The wireless communications system according to claim 9, wherein the base station, upon receiving the message, transmits an alert with information to the mobile station to alert the mobile station of the holding call.

1 15. The wireless communications system according to
2 claim 14, wherein the base station, in transmitting the
3 alert with information to the mobile station, causes a ring
4 tone to sound at the mobile station.

1 16. The wireless communications system according to
2 claim 14, wherein the base station, after transmitting the
3 alert with information to the mobile station, awaits an
4 acknowledgment of the alert with information from the
mobile station.

1 17. The wireless communications system according to
2 claim 14, wherein the base station, after transmitting the
3 alert with information to the mobile station, awaits a
4 connect order from the mobile station requesting connection
5 to the holding call and, upon receiving the connect order,
6 transmits a connect message to the mobile switching center.

1 18. A method of wireless communications, comprising:
2 receiving a release order at a base station
3 serving a mobile station requesting termination of call
4 connections to the mobile station while a call involving
5 the mobile station is holding following a call waiting
6 notification to the mobile station; and

7 responsive to receiving a clear request triggered
8 by the release order at a mobile switching center coupled
9 to the base station, transmitting a message to the base
10 station to maintain the resource allocations designated for
11 the mobile station and alert the mobile station of the
12 holding call.

13 19. The method according to claim 18, wherein the
14 step of transmitting a message to the base station to
15 maintain the resource allocations designated for the mobile
16 station and alert the mobile station of the holding call
17 further comprises:

18 transmitting a clear reject message defined to
19 prompt maintenance of the resource allocations designated
20 for the mobile station and transmission of an alert to the
21 mobile station of the holding call.

1 20. The method according to claim 18, wherein the
2 step of transmitting a message to the base station to
3 maintain the resource allocations designated for the mobile
4 station and alert the mobile station of the holding call
5 further comprises:

6 transmitting a clear command message with a cause
7 value defined to prompt maintenance of the resource
8 allocations designated for the mobile station and
9 transmission of an alert to the mobile station of the
10 holding call.

1 21. The method according to claim 18, further
2 comprising:

3 starting a timer for the base station having a
4 default value of 1.5 seconds in response to transmitting
5 the clear request;

6 stopping the timer for the base station in
7 response to receiving the message;

8 starting a timer for the mobile switching center
9 having a default value of 30 seconds in response to
10 transmitting the message; and

11 stopping the timer for the mobile switching
12 center in response to receiving a connect message
13 indicating that the mobile station has initiated connection
14 to the holding call.

1 22. The method according to claim 18, further
2 comprising:

3 responsive to receiving the message at the base
4 station, transmitting an alert with information to the
5 mobile station to alert the mobile station of the holding
6 call and to cause a ring tone to sound at the mobile
7 station.

1 23. The method according to claim 18, further
2 comprising:

3 after transmitting the alert with information to
4 the mobile station, awaiting an acknowledgment of the alert
5 with information from the mobile station and a connect
6 order from the mobile station requesting connection to the
7 holding call; and

8 upon receiving the connect order, transmitting a
9 connect message to the mobile switching center.

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